

24. The method of claim 22, wherein said Rho antagonists are selected from the group consisting of: ADP-ribosyl transferase C3; a biologically active fragment of ADP-ribosyl transferase C3; an analog; a derivative; an active fragment that is constructed as a chimeric protein or a chimeric peptide, both the chimeric protein and the chimeric peptide comprising a sequence that facilitates the chimeric protein or chimeric peptide to pass through a plasma membrane; Y27632; a genetically mutated form of Rho; a dominant negative mutant of Rho; another mutant of Rho; a genetically mutated form of Rho wherein the mutation is in the effector domain; and A-37, wherein said delivering prevents GTP exchange.

25. An antagonist of Rho family members or Rho activity, wherein the antagonist is able to overcome growth inhibition in the central or the peripheral nervous system and thereby foster regeneration of damaged or injured axons.

26. The antagonist as in claim 25, wherein said Rho family members are selected from the group consisting of Rho, Rac, cdc42, and Rho-associated protein kinase.

27. The antagonist as in claim 25, wherein said Rho activity is with the Rho kinase or with the regulatory pathway via interaction with GTP/GDP cycle.

28. The antagonist as in claim 25, wherein the interaction with the GTP/GDP cycle is selected from the group consisting of a GTP/GDP exchange proteins (GEP), a GDP dissociation inhibitor (GDI), and GTPase activating protein (GAP), the interaction serving to regulate Rho activity.

29. A method of identifying an antagonist of a Rho family member that suppresses neuron growth, the method comprising the steps of:

A1 (a) culturing neurons on a growth permissive substrate that incorporates a growth-inhibiting amount of the Rho family member; and

(b) exposing the cultured neurons of step (a) to a candidate Rho family member antagonist in an amount and for a period sufficient prospectively to permit growth of the neurons,

wherein a candidate Rho family member antagonist which elicits neurite outgrowth from the cultured neurons of step (a) is identified as a Rho antagonist.

30. A method of suppressing the inhibition of neuronal axon growth, the method comprising delivering to the nerve growth environment, a Rho family antagonist in an amount effective to reverse inhibition by growth inhibitory proteins present in an adult mammalian central nervous system.